

List of Plants

C LINALYL-ACETATE

Chemid

LINALYLACETATE

Dosage

ADI=500 ug/kg

ADI=200 ug/kg Martindale's 28th

LD50=14,550 mg/kg (orl rat) Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253.

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

Plant	Plant Part	Low PPM	High PPM	StdDev	*Reference
Acacia farnesiana	Flower	--	--		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
Acacia farnesiana	Plant	--	--		Pakist an Encyclopedia Planta Medica. 1986.
Anethum graveolens	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
Apium graveolens	Leaf	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Artemisia vulgaris	Plant	--	--		Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
Bursera delpechiana	Wood	10200.0	56400.0		*
Chrysanthemum x morifolium	Plant	6.0	23.0	-0.57	Wealth of India.
Cinnamomum camphora	Leaf	48.0	14400.0	2.05	*
Cinnamomum verum	Leaf	--	245.0	-0.47	Mallavarupu, G. R. et al. 1995. Investigation of the essential oil of cinnamon leaf grown at Bangalore and Hyderabad. Flav. & Fragr. J., 10: 239-242.
Cinnamomum verum	Bark	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Citrus limon	Essential Oil	--	--		*
Citrus paradisi	Fruit	--	--		Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.
Citrus aurantium	Leaf	4429.0	5500.0	0.46	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
Citrus aurantium	Flower	80.0	520.0	-0.45	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
Citrus medica	Pericarp	--	--		*
Coleus barbatus	Stem Essent. Oil	--	8100.0		Jim Duke's personal files.
Coleus barbatus	Leaf Essent. Oil	--	8100.0		Jim Duke's personal files.
Cymbopogon citratus	Plant	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cymbopogon winterianus	Plant	80.0	140.0	-0.51	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Cymbopogon nardus	Plant	24.0	96.0	-0.53	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
Elettaria cardamomum	Plant	1197.0	8000.0	3.27	*
Elettaria	Fruit	1197.0	8000.0		*

<i>Elsholtzia blanda</i>	Shoot	--	14.0	-0.27	Bestman, H.J., Rauscher, J., Vostrowsky O., Pant, A.K., Dev. V., Perihar, R. and Mathela, C.S. 1992. Constituents of the Essential Oil of <i>Elsholtzia blanda</i> Benth. (Labiatae). <i>J. Ess. Oils Res.</i> 4: 121-124
<i>Elsholtzia polystachya</i>	Leaf	--	--	-0.51	Mathela,C.S., Melkani,A.B., Bisht,J.C., Pant,A.K., Bestmann,H.J., Erler,J., Kobold,U., Rauscher,J. and Vostrowsky,O. 1992. Chemical Varieties of Essential Oils from <i>Elsholtzia polystachya</i> from Two Different Locations in India. <i>Planta Medica</i> 58: 376-379.
<i>Elsholtzia polystachya</i>	Leaf	--	--	-0.51	Mathela,C.S., Melkani,A.B., Bisht,J.C., Pant,A.K., Bestmann,H.J., Erler,J., Kobold,U., Rauscher,J. and Vostrowsky,O. 1992. Chemical Varieties of Essential Oils from <i>Elsholtzia polystachya</i> from Two Different Locations in India. <i>Planta Medica</i> 58: 376-379.
<i>Ferula gummosa</i>	Plant	--	--		*
<i>Ficus carica</i>	Leaf	--	--		Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin.
<i>Gardenia jasminoides</i>	Flower	--	--		ANON. 1948-1976. <i>The Wealth of India raw materials</i> . Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Hedeoma pulegioides</i>	Plant	36.0	180.0	-0.49	*
<i>Helianthus annuus</i>	Flower	--	--		Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
<i>Jasminum officinale</i>	Flower	186.0	285.0	-0.49	*
<i>Juniperus communis</i>	Plant	--	--		*
<i>Lavandula x intermedia</i>	Plant	2170.0	3950.0	1.32	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Lavandula x hybrida</i>	Shoot	0.5	3.5	-0.34	Tucker, A.O., Maciarello, M.J., Angell, S., Espaillat, J.R., and French, E.C. 1993. The Essential Oil of <i>Lavandula x hybrida</i> Balb. ex Ging., a Distinct Hybrid from <i>L. x heterophylla</i> Poir. (Labiatae). <i>J. Ess. Oil Res.</i> 5: 443-445.
<i>Lavandula latifolia</i>	Plant	1.0	198.0	-0.48	*
<i>Lavandula sp</i>	Shoot	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp.
<i>Lavandula angustifolia</i>	Flower	240.0	16500.0	2.0	*
<i>Melia azedarach</i>	Wood	--	--		*
<i>Mentha aquatica</i>	Leaf	--	--		List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Micromeria croatica</i>	Leaf	--	140.0	-0.49	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . <i>J. Ess. Oil Res.</i> , 3: 387-393.
<i>Micromeria thymifolia</i>	Leaf	--	10.0	-0.51	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . <i>J. Ess. Oil Res.</i> , 3: 387-393.
<i>Micromeria juliana</i>	Leaf	--	10.0	-0.51	Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . <i>J. Ess. Oil Res.</i> , 3: 387-393.
<i>Micromeria myrtifolia</i>	Shoot	--	0.2	-0.36	Ozek, T., Kirimer, N., and Baser, K.H.C. 1992. Composition of the Essential Oil of <i>Micromeria myrtifolia</i> Boiss. et Hohen. <i>J. Ess. Oil Res.</i> , 4: 79-80.
<i>Monarda russeliana</i>	Plant	--	557.0	-0.31	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda didyma</i>	Plant	50.0	505.0	-0.34	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda clinopodia</i>	Plant	--	4050.0	1.37	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda citriodora</i>	Plant	--	24.0	-0.57	*
<i>Monarda punctata</i>	Plant	49.0	378.0	-0.4	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda didyma</i>	Leaf	--	--		Flavour and Fragrance Journal, 6: 80.
<i>Monarda media</i>	Plant	--	69.0	-0.54	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Monarda didyma</i>	Flower	--	4.0	-0.53	Flavour and Fragrance Journal, 6: 80.
<i>Myrtus communis</i>	Plant	18.0	28.0	-0.56	*
<i>Ocimum basilicum</i>	Plant	15.0	240.0	-0.46	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
<i>Ocimum suave</i>	Shoot	--	--		<i>J. Nat. Prod.</i> 44: 308.
<i>Origanum vulgare</i>	Plant	8.0	184.0	-0.49	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
<i>Origanum majorana</i>	Plant	3.0	3030.0	0.88	*
<i>Origanum vulgare</i>	Plant	--	50.0	-0.55	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431.
<i>Origanum vulgare</i>	Plant	--	7.0	-0.57	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four

<i>Origanum onites</i>	Shoot	--	--	-0.37	Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. <i>Flav. & Frag. J.</i> 8: 331-7.
<i>Origanum vulgare</i>	Plant	--	15.0	-0.57	Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431.
<i>Piper nigrum</i>	Fruit	--	--		List, P.H. and Horhammer, L. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Prunella vulgaris</i>	Essential Oil	--	--		*
<i>Prunella vulgaris</i>	Plant	--	210.0	-0.48	*
<i>Pycnanthemum flexuosum</i>	Shoot	--	612.0	3.93	Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .
<i>Rosmarinus officinalis</i>	Shoot	--	4.0	-0.34	Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. <i>Flavor and Fragrance Journal</i> , 1: 137-142. 1986.
<i>Salvia sclarea</i>	Plant	1.0	3750.0	1.23	*
<i>Salvia officinalis</i>	Plant	--	6048.0	2.33	*
<i>Satureja montana</i>	Plant	3.0	240.0	-0.46	*
<i>Satureja obovata</i>	Leaf	--	--		Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of <i>Satureja obovata</i> . <i>Phytochemistry</i> 35(1): 83.
<i>Satureja obovata</i>	Leaf	--	55.0	-0.5	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of <i>Satureja obovata</i> . <i>Phytochemistry</i> 35(1): 83.
<i>Satureja obovata</i>	Leaf	--	55.0	-0.5	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of <i>Satureja obovata</i> . <i>Phytochemistry</i> 35(1): 83.
<i>Satureja subspicata</i>	Plant	--	15.0	-0.57	Stanic, G., Petricic, J., and Blazevic, N. 1991. Gas Chromatographic Investigations of Essential Oils of <i>Satureja montana</i> and <i>Satureja subspicata</i> from Yugoslavia. <i>J. Ess. Oil Res.</i> , 3: 153-158.
<i>Satureja obovata</i>	Leaf	--	230.0	-0.47	Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of <i>Satureja obovata</i> . <i>Phytochemistry</i> 35(1): 83.
<i>Skimmia arboreascens</i>	Leaf	2300.0	16800.0	2.47	*
<i>Tagetes patula</i>	Plant	--	262.0	-0.45	List, P.H. and Horhammer, L. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Tagetes minuta</i>	Plant	34.0	125.0	-0.52	*
<i>Tagetes erecta</i>	Plant	--	61.0	-0.55	List, P.H. and Horhammer, L. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
<i>Teucrium oxylepis</i>	Shoot	--	0.12	-0.37	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium asiaticum</i>	Shoot	--	6.25	-0.32	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium scorodonia</i>	Shoot	--	0.35	-0.36	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium salviastrum</i>	Shoot	--	--		Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium oxylepis</i>	Shoot	--	0.06	-0.37	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Teucrium pseudoscordonia</i>	Shoot	--	0.14	-0.36	Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9.
<i>Thymus serpyllum</i>	Plant	--	--		Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .
<i>Thymus x citriodorus</i>	Plant	--	--	-0.58	Stahl-Biskup, E. and Holtzhausen, J. 1995. Essential oil and glycosidally bound volatiles of lemon-scented thyme, <i>Thymus x citriodorus</i> (Pers.) Schreb. <i>Flav. & Fragr. J.</i> 10: 225-229.
<i>Thymus zygis</i>	Shoot	--	100.0	0.34	De Cunha, A.P. and Salguero, L.R. 1991. The Chemical Polymorphism of <i>Thymus zygis</i> ssp. <i>sylvestris</i> from Central Portugal. <i>J. Ess. Oil Res.</i> 3: 409-12.
<i>Thymus broussonettii</i>	Shoot	--	60.0	0.06	Tantauoi-Elaraki, A., Lattaoui, N., Errifi, A. and Benjilali, B. 1993. Composition and Antimicrobial Activity of the Essential Oils of <i>Thymus broussonettii</i> , <i>T. zygis</i> and <i>T. saturejoides</i> . <i>J. Ess. Oil Res.</i> 5: 45-53.
<i>Thymus mastichina</i>	Plant	100.0	150.0	-0.51	Lawrence, B.M., <i>Essential Oils 1976-1977</i> , <i>Essential Oils 1978</i> , <i>Essential Oils 1979-1980</i> .
<i>Thymus zygis</i>	Shoot	--	18.0	-0.24	Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. <i>Thymus zygis</i> Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. <i>JEO5</i> : 153-8.
<i>Thymus vulgaris</i>	Plant	15.0	4680.0	1.67	*
<i>Thymus capitatus</i>	Shoot	--	--	-0.37	Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. <i>Flav. & Fragr. J.</i> 8: 331-7.
<i>Thymus zygis</i>	Shoot	--	18.0	-0.24	Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. <i>Thymus zygis</i> Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. <i>JEO5</i> : 153-8.
<i>Thymus saturejoides</i>	Shoot	--	50.0	-0.02	Tantauoi-Elaraki, A., Lattaoui, N., Errifi, A. and Benjilali, B. 1993. Composition and Antimicrobial Activity of the Essential Oils of <i>Thymus broussonettii</i> , <i>T. zygis</i> and <i>T. saturejoides</i> . <i>J. Ess. Oil Res.</i> 5: 45-53.

<i>Trifolium pratense</i>	Flower	--	14.0	-0.53	Buchnauer,G.,Jirovetz,L.,Nikiforov,A.1996.Comparative Investigation of Essential Clover Flower Oils from Austria Using Gas Chromatography-Flame Ionization Detection, Gas Chromatography-Mass Spectrometry, and Gas Chrom.-Olfactometry.J.Agric.Food Chem.44:1827-8
<i>Zanthoxylum alatum</i>	Leaf	--	45.0	-0.5	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
<i>Zanthoxylum alatum</i>	Fruit	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.